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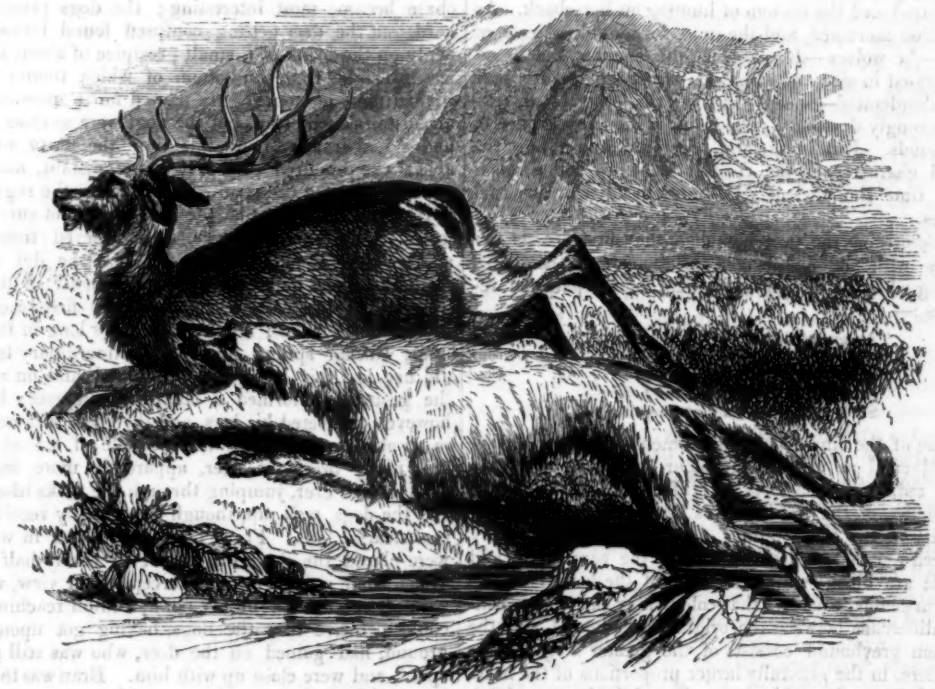
HIGHLAND DEER-HUNTING.



[The Highland Deer-hound in Chase.]

In what has been called, and, considering the qualities required, not inappropriately, the "Art of deer-stalking,"* the dog plays a comparatively subordinate part; the 'stalker' trusts rather to the unerring accuracy of his rifle than to the speed and prowess of his canine followers; but in the olden days of deer-hunting, before rifles were known, or any species of fire-arms dreamed of, it was very different; skill on the part of the hunter was undoubtedly needed then as now, but with his gallant dogs rested in a great measure the success of the chase. The stag had not then simply to be brought to any particular place, within range of the sportsman's shot; he had to be fairly followed and overtaken by superior swiftness, seized, and overpowered by superior force. It will be evident that dogs of no ordinary kind could accomplish this; we shall not, therefore, be surprised to find that the Highland deer-hounds were superior to every other known breed for the combination they exhibited of speed, endurance, courage, and power. But it is a matter of surprise, we may add, it is a matter to be lamented, that their noble race appears to be on the very eve of extinction. In the present paper we propose to give a few notices of its history, appearance, habits, &c., for which we must again express our acknowledgements to Mr. Scrope's recent work.†

This animal has been known by various appellations, as the Irish wolf-dog, the Irish greyhound, the Highland deer-hound, and the Scotch greyhound, for there appears no doubt that all the dogs thus denominated were essentially of the same breed. Its original home is supposed to have been Ireland, from whence, during the proud days of antient Rome, it was frequently conveyed in iron cages to assist in the sports of the city of the Tiber. In Buffon we find the following passage:—"The Irish greyhounds are of a very antient race, and still exist (though their number is small) in their original climate; they were called by the ancients, dogs of Epirus, and Albanian dogs. Pliny has narrated, in the most elegant and energetic terms, a combat between one of these dogs, first with a lion, then with an elephant; they are much larger than the mastiff." Of their size, power, and of their possessing the true greyhound form and appearance, the following quotations from Holinshed and Evelyn offer satisfactory testimonies. The former says, in his 'Description of Ireland and the Irish,' written in 1586, "They are not without wolves, and greyhounds to hunt them, bigger of bone and lim than a colt;" and the latter, speaking of a bear-garden, "The bulls [bull-dogs] did exceedingly well, but the Irish wolf-dog exceeded, which was a tall greyhound, a stately creature indeed, who beat a cruele mastiff."

Of the antiquity of the existence of a similar (and doubtless the same) race of dogs in Scotland, possessing a great general resemblance to the present greyhound, but much larger, stronger, and more courageous, there are many evidences. In the church-yard of Meigle, a village in Perthshire, are some sculptured stones, representing, in relief, the figures of several animals of this kind: the

* For an account of 'Deer-Stalking in the Highlands,' see vol. viii., p. 106, 119, of our publication.

† Description of the Highland Deer-hound, communicated to Mr. Scrope, by Archibald Macneil, Esq.

date of these sculptures is considered to have been prior to the introduction of Christianity. In various other parts of the country similar representations are found. In England also the breed appears to have been greatly encouraged. In the Anglo-Saxon times, a nobleman never went out unaccompanied by some of these dogs and his hawk, and so highly were they esteemed, that by the forest laws of Canute it was ordered that no person under the rank of a gentleman should keep one. Until after the Norman Conquest the chase was always, even in England, pursued on foot: the nobles of the Conqueror's train introduced the custom of hunting on horseback. As cultivation increased, and the most formidable objects of chase—the wolves—decreased in this country, the breed degenerated in size and strength, whilst the quality now more desiderated—speed—was, on the other hand, still more strongly developed; the result is the present race of greyhounds. But in Ireland, Scotland, and Wales the rugged character of the country kept up for a much longer time the ancient deer-hunts in all their essential features.

In describing the deer-hound we may first present our readers with the following translation from the Celtic, showing what the ancient ideas were of his personal requisites:—

"An eye of sloe, with ear not low,
With horse's breast, with depth of chest,
With breadth of loin, and curve in groin,
And nape set far behind the head;—
Such were the dogs that Fingal bred."

Some of the finest living specimens are described by Mr. Macneil as varying in colour from pale yellow to sandy red, with considerable differences in the length and quality of the hair, and as having one common peculiarity — the never-failing accompaniment of purity of breed—namely, that the tips of the ears, eyes, and muzzle are black, whilst the rest of the body is of one uniform colour, whatever that colour may be. The principal difference between the original deer-hound and the common greyhound consists of the greater height of the shoulders, in the generally larger proportions of the head, neck, and muzzle, and in the quality of the bone, which is coarser. The gentleman we have just referred to estimates their former average height at thirty inches, their girth at thirty-four inches, and their weight at a hundred pounds. In disposition the deer-hound is more playful and attached than the greyhound, but bolder and fiercer if roused: he is also more sagacious. A striking peculiarity of this breed is that there is a greater difference in size between the male and female than in any other of the canine varieties. Of this noble race there now remain in England and Ireland no traces whatever, and in Scotland there are not probably in all above a dozen pure deer-hounds to be met with; as we have before observed, therefore, the race appears doomed to entire extinction, unless the possessors of the few remaining animals use extraordinary exertions to increase their number. That some such exertions may be made appears the more probable from the circumstance that the old Scottish mode of chase, deer-coursing, has not yet fallen into desuetude. Mr. Macneil's paper furnishes us with a very graphic account of the proceedings of a small party of six sportsmen, attended by a deer-stalker, &c., in the island of Jura, in August, 1835, from which we extract the following passage as illustrative of the qualities of the Highland deer-hound, even "in these degenerate days." We omit all the preliminary manœuvres to attain a favourable position, as they are essentially the same as those we have already described in the article on 'Deer-Stalking:'—

"The dogs were slipped, a general halloo burst from the whole party, and the stag wheeling round set off at full speed, with 'Buskar' and 'Bran' straining after him. The brown figure of the deer, with his noble antlers laid back, contrasted with the light colour of the dogs, stretching along the dark heath, presented one of the most exciting scenes that it is possible to imagine. The deer's first attempt was to gain some rising ground to the left of the spot where we stood, and rather behind us; but being closely pursued by the dogs, he soon found that his only safety was in speed; and (as a deer does not run well up hill, nor, like a roe, straight down hill) on the dogs approaching him he turned, and almost retraced his footsteps, taking, however, a steeper line of descent than the one by which he ascended. Here the chase became most interesting; the dogs pressed him hard, and the deer getting confused found himself suddenly on the brink of a small precipice of about fourteen feet in height, from the bottom of which there sloped a rugged mass of stones. He paused for a moment, as if afraid to take the leap, but the dogs were so close that he had no alternative. At this time the party were not above one hundred and fifty yards distant, and most anxiously waited the result, fearing, from the ruggedness of the ground below, that the deer would not survive the leap. They were, however, soon relieved from their anxiety; for though he took the leap, he did so more cunningly than gallantly, dropping himself in the most singular manner, so that his hind legs first reached the broken rocks below; nor were the dogs long in following him; Buskar sprang first, and, extraordinary to relate, did not lose his legs; Bran followed, and on reaching the ground, performed a complete somerset; he soon, however, recovered his legs, and the chase was continued in an oblique direction down the side of a most rugged and rocky brae, the deer, apparently more fresh and nimble than ever, jumping through the rocks like a goat, and the dogs well up, though occasionally receiving the most fearful falls. From the high position in which we were placed, the chase was visible for nearly half a mile. When some rising ground intercepted our view, we made with all speed for a higher point, and on reaching it, we could perceive that the dogs, having got upon smooth ground, had gained on the deer, who was still going at speed, and were close up with him. Bran was then leading, and in a few seconds was at his heels, and immediately seized his hock with such violence of grasp as seemed in a great measure to paralyze the limb, for the deer's speed was immediately checked. Buskar was not far behind, for soon afterwards passing Bran, he seized the deer by the neck. Notwithstanding the weight of the two dogs, which were hanging to him, having the assistance of the slope of the ground, he continued dragging them along at a most extraordinary rate (in defiance of their utmost exertions to restrain him), and succeeded more than once in kicking Bran off."* The poor animal is at length killed, but though told with great animation, we prefer omitting an account of the final struggle, in which the sufferings of the stag, we think, must have caused emotions more painful than could be compensated even by the excitation of the successful end of the chase, to a humane and well-constructed mind.

DOMESTIC CHEMISTRY.—No. XI.

STARCH.

Starch may be extracted from different kinds of grain, such as wheat, barley, rye, oats, rice, maize, millet, &c.; it may likewise be obtained from peas, beans, and lentils, and from many tuberous and tap roots. The quantity of starch yielded by corn of different sorts is extremely variable; and even in the case of wheat, which affords the best as to quality, the return is uncertain, and is affected by circumstances of soil, manure, season, and climate. Wheat of inferior quality, or that has been damaged by long keeping in granaries, is often employed

* Scrope's 'Deer-Stalking,' p. 354.

in the manufacture of starch; but when this article is required to be of fine quality, the best corn must be used, and the process is as follows:—

The grain being well cleaned, it is crushed between iron rollers, and put into wooden vessels full of water, to ferment—a process which is assisted by exposing the vessels to the heat of the sun, and by changing the water frequently. The time occupied by this process varies according to the season, but seldom exceeds twelve or fourteen days. When the grain is sufficiently softened and fermented, it will burst easily under the finger, and will give out a milky white liquor. The grains are now removed from the water by means of a sieve, and put into a canvas sack, where the husks are separated by rubbing; and the sack is afterwards thrown into a tub of cold water, and trodden or beaten until the water becomes milky from the starch which is pressed out of the grain. Should any scum make its appearance on the surface of the water, it is carefully removed. The water is then allowed to run off through a fine sieve into a settling vessel, and fresh water is added to the grains, in order that any remaining farina may be extracted: this is repeated till the pressure of the grain no longer causes the water to become turbid. The farina or starch is now precipitated in the settling-vessels, and the saccharine matter also held in solution is got rid of by exposing the vessels to the sun, which produces the acetous fermentation, and purifies the starch by taking up such matter as would injure its colour and quality. This fermentation is no sooner completely produced, than the water is poured gently off from the starch; the latter is washed several times in fresh water, and then placed on linen cloths supported by hurdles, to drain. After the starch has parted with much of its moisture, the remainder is extracted by pressing and wringing the cloths which contain it, and then cutting the starch in pieces, and laying it in an airy place, where the floor, composed either of slightly burned bricks or of plaster, imbibes a share of the watery particles not yet dissipated; the heat of a stove is sometimes added, to complete the process, ut this is seldom necessary except in the winter season. When the starch is thoroughly dried, it is scraped, in order to remove the outside coating (from which starch of an inferior description is made); and the pieces are then cut to a convenient size for sale. This is perhaps the simplest method of manufacturing starch, though there are others to which, were it necessary, we might likewise allude.

Potatoes contain a large quantity of starch, and an inferior quality of this article is frequently obtained from them. The potatoes are first washed in a cylindrical wooden cage, which revolves in a trough filled with water to the level of the axis. They are then reduced to pulp in a rasping-machine; which consists of a wooden drum covered with sheet-iron, and turned by a winch fixed upon each end of the shaft; the sheet-iron is roughened on the outside; and the whole is enclosed in a square wooden box. The potatoes are introduced into the machine at the top by means of a hopper, and a stream of water is made to play into it at the same time, that the rasp-drum may not become clogged and its rotation checked. Beneath the wheel is a pulp-chest, made to slide out, so as to be readily replaced, when full, by another. With this machine two men, with one for a relay, will rasp from two and a half to three tons of potatoes in twelve hours. The potato-pulp is now placed upon a fine wire or hair sieve, over the mouth of a large vat, and water passed through the sieve from several jets. While these streams are being conveyed through the pulp, the latter is well kneaded and stirred by the hand or a brush, so that nothing but fibrous particles are left behind. As this refuse of the first rasping generally retains about five per cent. of starch, which cannot be separated in this way, it is subjected to a second rasping upon another cylinder. The turbid water is allowed partially to settle, and is then run off into a second vessel, and afterwards into a third; so that the whole of the starch is at length precipitated, the last collected being the finest powder. The starch is now taken out and dried, and is fit for use.

Starch forms a considerable portion of most of the vegetable seeds used as food, and is contained in a great variety of plants; entering into combination with the sugar, oil, or other constituent parts of the vegetable. Thus, the substance extracted from the pith of the sago-palm, of which such frequent use is made in the diet of invalids, is nothing more than a species of starch. So is likewise the cassava, procured from the root of a plant growing in the West Indies and in Africa, and which, by a pecular method of drying, is made to agglomerate into small lumps called tapioca. The much esteemed powder obtained from the root of the West Indian plant *maranta arundinacea*, and known to us as arrow-root, is also a kind of starch, in the making of which a process is employed very similar to that which we have described above for the manufacture of potato-starch. The forms in which we receive sago, tapioca, and common starch are artificial; and were they all sold in a powder such as arrow-root, we should find that the difference in the character of the several substances could scarcely be detected without microscopical examination.

Starch is composed of minute particles, which, when examined by the aid of a microscope, are found to be granules more or less rounded, without any appearance of a crystalline form. It is supposed that these granules are moulded in the cellules of the texture by which they are formed; for it is probable that when first secreted and deposited in the cellules, they are in a semi-fluid state, and the excess of water is afterwards, by some natural process, removed. Some French chemists have shown that each of these minute grains is wrapped in a smooth integument not affected by water at common temperatures; within which integument is enclosed a substance rather more soluble.

In mixing starch for use, we may remark that the cold water which is first put to it does not dissolve the starch, but that the latter, falling into a powder, forms with the water a kind of emulsion; this combines with the boiling water, and forms a thick paste. The application of this paste to the purposes of stiffening is well known. In the process of boiling, it appears that starch undergoes a certain degree of decomposition, which brings it nearly to the state of gum: this may be observed by allowing boiled starch to cool to its usual form of a semitransparent jelly, and then drying it by artificial heat. There is indeed a kind of starch made solely for the purpose of being converted into gum for the use of the calico-printers, and the process having been first carried on upon a large scale in this country, the substance is now known by the name of British gum.

When starch in solution is added to a weak tincture of iodine, a fine blue colour is produced, which is very characteristic of starch, since the same effect is produced by no other substance. Iodine therefore furnishes us with a useful test for the presence of starch; and, on the other hand, starch is equally useful to detect the presence of free iodine. But if starch be gently roasted before a fire, its properties become changed; it assumes a pale brown colour, is soluble in water both cold and hot, and has in fact acquired the properties of gum, in which state iodine does not produce the blue colour with it. When bread is toasted, the surface becomes converted into a kind of gum; so that the familiar beverage 'toast and water' is in fact a weak solution of the gum obtained during the process of toasting the bread. Gum is also found ready formed in vegetables, and constitutes what is called *mucilage*: it frequently exudes from the stems and barks of trees, a portion of the water evaporates, and solid gum is left on the tree. Gum-arabic is a familiar

example of this natural product; it exudes from a species of acacia growing in Morocco, whence large quantities are imported into this country. Our reason for noticing it here is because, like the gum obtained from starch, it is nutritious; and during the gum season it is said to constitute the chief article of food among the Arabs.

We owe to M. Kirchoff the discovery that starch is convertible into sugar. A spontaneous change of this description is supposed to give the peculiar sweetness we find in frost-bitten potatoes. It is said that a mixture of starch and water, if exposed to each other's action for a great length of time—two years for instance—will be found materially altered, one-half of the starch being actually converted into sugar. But there is a quicker and more decided method of producing this remarkable change. If a quantity of potato or wheaten starch be boiled for a few hours in water acidulated with sulphuric acid, adding water occasionally to make up for evaporation and to preserve perfect fluidity; and if it then be saturated with lime, and the boiling continued after separating the sulphate of lime, the solution will gradually become concentrated, and a dark syrupy liquid will be obtained, which on cooling affords abundance of sugar in crystals. This sugar differs in several respects from common sugar, being not quite so sweet nor so soluble in water. It also crystallizes differently, and is fusible at a much lower heat.*

In the process of germination, grains of wheat, barley, &c. lose much of the starch or farina which constitutes their substance, and become filled with saccharine matter; this is very sweet; it readily dissolves in water, and forms a syrup, which, by evaporation, acquires very nearly the flavour and sweetness of treacle. This is another way of observing the conversion of starch into sugar.

The consumption of starch in this country is not equal to that of some of the continental nations. In many parts of Germany, Switzerland, and Holland, the meanest peasantry are found to aim at that neatness of appearance which is given by the stiffened cap and frill, and in those countries the manufacture of starch is carried on upon a large scale. Our own consumption of starch is comparatively limited, especially since the discontinuance of the custom of wearing, or rather, using hair-powder, which has diminished the demand for this article. The greater part of the starch used in this country is manufactured in and near London, and almost exclusively of wheat-meal.

There is a way of employing the waste material from starch-works which is probably unknown to our younger readers. We mean the admixture of the starchy refuse with plaster of Paris, pipe-clay, or chalk, and making them, with a slight flavouring of sugar, into the various sugar-plums, lozenges, 'hundreds and thousands,' and other articles of hard confectionery, which are sold about the streets or by the inferior class of confectioners. There is a species of refined liquorice made in this way, which is nothing more than starch, lampblack, and a little common Spanish liquorice.

HEXHAM.

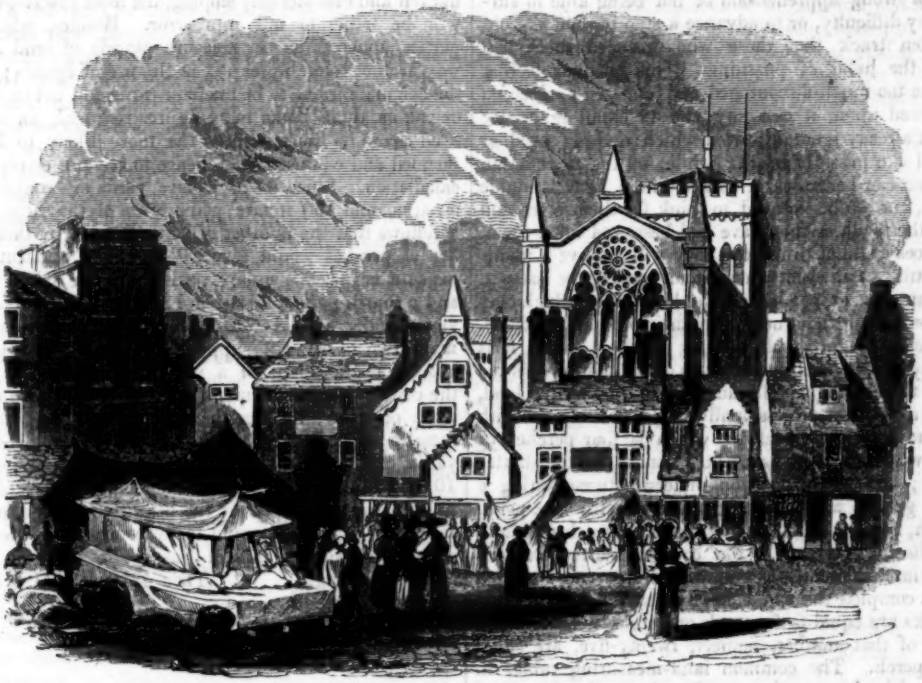
The town of Hexham in Northumberland is in the south division of Tindale ward, 278¼ miles from London. The parish comprehends Hexham township, 4310 acres, with a population, in 1831, of 4666; and Hexhamshire, 24,060 acres, with a population, in 1831, of 1376: together, 28,370 acres, population 6042. Hexham is believed to have been a Roman station. Camden conjectured that it was Axelodunum, one of the stations of the 'Notitia,' on the line of the wall (*per lineam valli*), which later antiquaries fix near Carlisle; Horsley contended for its being the Epiacum (Ἐπίακον) of Ptolemy, a town of the Brigantes, which others fix at Lanchester.

Two inscriptions on stones in the vaults of the antient church are considered as proofs that a Roman station did exist here. In the seventh century (A.D. 674) a monastery was founded here by St. Wilfrid, who erected the monastic buildings in a style of magnificence little known at that day. He built also three churches in Hexhamshire, which domain had been granted to him by the queen of Northumbria. A few years afterwards (about A.D. 678), on the division of the Northumbrian diocese into three parts, a bishop's see was established at Hexham, and continued for many years, until the bishops were driven out by the Danes, and the diocese was afterwards united to Lindisfarne. The abbey and town of Hexham were sacked by the Danes early in the ninth century; and in A.D. 875 it was again attacked, the church burnt, and the inhabitants massacred.

In the twelfth century the archbishop of York established here a prior of regular canons of St. Austin, and bestowed on them the former cathedral, and many other gifts (A.D. 1112). In the Scotch wars of Edward I. the town and part of the church were burnt, and the title-deeds of the priory lost; but by royal authority an inquisition was taken (A.D. 1297), and their various gifts confirmed by charter. The revenue of the priory, at the dissolution, was 138*l.* 1*s.* 9*d.* gross, or 122*l.* 11*s.* 1*d.* clear.

The town is pleasantly situated on an eminence, near the south or right bank of the Tyne, a little below the junction of the North and South Tyne. It consists of several streets, the principal of which are tolerably wide, but the rest are generally narrow; the streets are partially paved and indifferently lighted. The market-place is a spacious square, tolerably well paved, and surrounded with pretty good houses; on the south side of the market-place is a market-house, furnished with piazzas; part of it is appropriated as a butter and poultry market, and part to stalls for butchers' meat: at one end of the building is a 'pant,' or reservoir, the water to which is conveyed by pipes. In the market-place is an antient stone building, with a dial in front, formerly used as the town-hall of the bishops and priors of Hexham, and now used as a sessions-house. There are a bridge over the Tyne of nine principal arches, and three supplementary arches to allow passage to the waters in time of floods; a suspension-bridge over the South Tyne, near the town; and a bridge with two arches over a burn west of the town. On the top of the hill on which the town stands, not very far from the town-hall, is a square tower, once used as a prison by the bishops of Hexham. But the most important building is the old priory church, used as a parish church. It is a cruciform building with a central tower, above 100 feet high to the battlements, or 125 feet high to the top of the vane. The nave, burnt by the Scots in the time of Edward I., has never been rebuilt; the transepts are separated from the choir by a screen richly carved in the lower part and adorned in the upper part by an emblematical painting. The choir is separated from its side aisles by massive clustered pillars supporting pointed arches; above these is the second tier of arches, of Norman character, separated by massive clustered columns; and above these again, a third tier of arches, pointed, supporting the wooden roof. There is a fine east window, and in the church are several antient monuments. There is an antient crypt, which some have supposed to be part of the original Saxon church built by Wilfrid. At the west end of the church are the remains of the monastic buildings; the refectory is yet entire, and is occasionally used as a room of entertainment; it is very spacious, and has an oak roof. There are some remains of the cloisters, which show the richness and excellence of their architecture. The gateway of the abbey, supposed by many to be Saxon, is also standing. There are two Catholic chapels, a Scotch church, and two or three other dissenting places of worship in the parish.

* See No. 552. page 438, 'Domestic Chemistry—Sugar.



[Priory Church. Hexham East end.]

Several manufactures and branches of trade are carried on,—spinning woollen yarn, hat-making, tanning, leather-dressing, and glove-making. The market is on Tuesday for corn and provisions; and there is a Saturday market for butchers' meat. A market for cattle is held on the alternate Tuesdays during a considerable part of the year. There are two yearly markets for horses, cattle, sheep, and swine: at the earlier of these, held in August, vast quantities of lambs are sold. The Midsummer sessions for the county are held here, and petty-sessions for the ward every month. In the western part of the town is a house of correction for the county.

The living is a perpetual curacy, of the clear yearly value of 139*l*., in the peculiar jurisdiction of the archbishop of York.

There were, in 1833, a grammar-school, with a small endowment and sixty-five scholars; a school, partly supported by subscription, with two hundred and thirty children; seven other day-schools, with two hundred scholars; and six Sunday-schools, with about seven hundred and five children.

LAND-SURVEYING.

It will hardly be expected that the mere ploughman and carter, according to the present system of education among the agricultural population, should possess any knowledge of land-surveying, or of practical measuring generally, since to acquire a competent knowledge in land-measuring, timber-measuring, hay-rick measuring, &c., it is obvious that an intimate acquaintance with the names and properties of sundry geometrical figures is absolutely necessary; attainments which are hardly ever attempted by those who, from their early years, are engaged in the ordinary duties of farm labour. But fully to comprehend the science of land-surveying, so as to be able to measure fields and farms, and map them, and calculate their contents, upon strictly mathematical principles, and to be able to measure a regular-shaped piece of ground, and cast the contents thereof, are two very different things; for in the former case the measurer applies a mathematical knowledge by which he can easily prove the correctness of his work; whereas in the latter case a person may be taught to measure a piece of ground, and cast the contents too after a mere mechanical form, just as a child might be taught to do many things without in the least degree comprehending the principle upon which the operation is founded. It is our opinion, however, that where a farm-servant, or labourer, has been taught at school the first four fundamental rules of arithmetic, namely, addition, subtraction, multiplication, and division, and afterwards continued occasionally to practise them, so as to keep the method of performing the several operations familiarly in his mind,—there would be but little difficulty in instructing him how to measure and calculate the contents of almost any field or piece of ground which was not very irregular in its shape; and in many cases were a person of this humble condition able to undertake simple measurements of this nature, it would not only be the means of a saving in both time and expense to his employer, but often a source of satisfaction to himself in thus being able to determine many things connected with his ordinary work; and in ascertaining, when working by the job, that he is not imposed upon.

We feel somewhat apprehensive that there may be persons found who will be inclined to ridicule the idea of our introducing the subject of practical measuring, and that of land in particular, into a treatise professing to explain and illustrate the duties of the ordinary ploughman. But this shall not deter us from our purpose, for we consider the range which the ploughman fills to be so wide—beginning with the commonest order of farm labourers, and ending with the working farmer—that we feel assured, provided we succeed in making the remarks we purpose introducing upon this subject sufficiently plain, practical, and intelligible, that our labours will not have been in vain; for among the many, a few at least will be found both ready and willing to receive instruction. There is, it must be confessed, among the lower orders, and particularly among the rural population, a backwardness in attempting whatever appears not to belong

to their particular business or situation in life; and apparently a strong apprehension of not being able to surmount any difficulty, or to advance a step beyond the old and beaten track that those who preceded them had been in the habit of pursuing. This peculiar feeling cannot be too much discouraged and opposed; since, if rigidly acted upon, it can only tend to entail ignorance upon the already ignorant, from which nothing good or beneficial can possibly result; while, on the other hand, where men can be drawn or coaxed into a little laudable ambition, and so be induced to think for themselves and to exert the faculties they have had bestowed upon them, the chances are that in the end they will receive a manifold reward; at all events they cannot possibly be losers in the attempt to acquire a little useful knowledge, which may always be done without neglecting their ordinary business.

The rod, pole, or perch—for by all these names it is familiarly known in different parts of the country—is the measure the most generally adopted in measuring land, by such as are not professionally land-measurers. With the latter, however, the chain, which is four perches, or twenty-two yards long, is adopted instead of the shorter measure; and where a person understands measuring a piece of ground with a pole or a cord which is one perch in length, surely he would not experience much difficulty in substituting the chain. For convenience the chain is divided into smaller divisions called links, one hundred of which complete the whole chain; and as these one hundred links are equal to four rods or perchs, it follows that a fourth of that number, namely, twenty-five, are equal to one perch. The common land-measuring tables in our school-books run thus:—40 poles make 1 rood, 4 roods make 1 acre; but regarding the chain we will only observe, 10 chains in length, by 1 broad, is an acre; which is precisely the same thing as 40 poles in length, by 4 broad; for in either case the acre would contain 40 multiplied (×) by 4, equal (=) 160. The length of a pole, in feet, is 16½, or 5½ yards; and the number of feet contained in a perch of ground is 16½ multiplied by 16½, or 272¼. But since from persons who engage to measure crops of grass, grain, &c.—and for such we are now especially writing,—a great degree of accuracy is neither looked for nor required, any smaller quantity than a perch is seldom regarded in the calculation. When land is sold, sometimes at a very high price, a single perch may then be of a considerable value, and hence a regular surveyor is usually employed for the satisfaction of all parties concerned. The surveying chain, though exactly four poles in length, is not however divided into poles by any particular marks; but instead of which there is a piece of brass fastened to a small round ring at the end of every 10 links, each piece of brass having as many points to it as there are tens—reckoning from the nearer end to the place where it hangs; thus a piece with three points would indicate 30 links,—and so on: the centre-piece, or that placed at the end of 50 links, reckoning either way, is commonly of a round form, and without any points. The value of a good chain is about 12*s.* or 14*s.*,—but an inferior one, such as farmers commonly use, may be bought for 6*s.* or 8*s.*

Though the most general way for a farmer, or other person not practically a surveyor, to measure land, is with the assistance of a cord or a stick which is a rod in length—without any other implement or instrument whatever, by which means the contents are often attained with sufficient accuracy for common purposes; yet there is another, and even a ruder mode of measuring sometimes resorted to, by parties connected with farming and agricultural pursuits,—we mean that of measuring by the yard, or rather the pace, making use of no gauge or implement whatever. We are aware that there may, here and there, be persons found who are able, where the ground is tolerably smooth and level, to proportion their paces or strides with so great a degree of accuracy as to arrive very nearly at the truth; but when the surface is uneven and considerably sloping, the most practised pacer will be liable to fall into error. Besides, where the parties undertaking to measure parcels of land in this way are not tolerably expert at the use of figures; where the calculation has to be made in yards and not in perches or chains, there being more figures required, an unpractised hand is consequently the more likely to become puzzled and confused, and hence to commit errors in the calculation. Since 4840 square yards are contained in an acre, and 160 square perches are of the same extent, it follows that the number of yards divided by this number of perches would give 30¼ for the quotient; and hence it is that 30¼ square yards make one rod or perch; and a fourth part of 4840, or 1210, that is 40 times 30¼ yards make a rood. In endeavouring to explain this more clearly, we will suppose the contents of a piece of ground in the shape of a parallelogram, oblong, or, as the country people often call it, a *long* square, to be precisely one acre, the length being exactly ten times the breadth; that is, 220 yards, or 40 poles long,—and 22 yards, or 4 poles in breadth; or, in chains, it would be 10 long and 1 wide. Now, to calculate this in yards, after multiplying the length by the breadth, in order to obtain the whole content, it would be necessary to divide by the number of yards in an acre thus:—

220 length
22 breadth

44
44

4840 content.

Then 4840)4840(1 acre.
4840

But were this measured in poles or perches, instead of yards, the work would stand thus:—

40 length
4 breadth

160 content.

Then 160)160(1 acre, as before.
160

Now had there been any surplus, or odd quantity remaining, considerable more work would have been required, particularly when calculating by yards; for what had remained over the acre must have been divided by 1210 in order to find the roods (if any); and then, if there had been a remainder still, that must have been divided by 30¼ in order to obtain the number of perches; or else, in order to avoid the necessity of dividing by a number that contains a fractional quantity—such as ¼, the remainder must have been multiplied by 40, and then divided by 1210, as in the case of ascertaining the number of roods.

[To be continued.]

GUY'S CLIFF.

[Concluded from No. 553.]

On a piece of rising ground between Warwick and Guy's Cliff, which ground is called Guy's Cross Hill, there was once a pillar, but it has not existed for some generations. To this pillar, according to tradition, Guy was in the habit of repairing, but for what purpose the aforesaid tradition does not inform us.

Corbett, first Bishop of Oxford, and afterwards of Norwich, thus humorously alludes to the circumstance in his 'Iter Boreale:'—

"Beyond this, in the roadway as we went,
A pillar stands where this Colossus leant;
Where he would sigh, and love, and, for heart's ease,
Ofttimes write verses (some say) such as these:—
'Here will I languish in this silky bower,
Whilst my true love triumphs in yon high tower.'"

The legends relative to Guy differ in many particulars, and there can be no doubt that they are all, more or less, mixed up with fiction, though the existence of such a hero can be scarcely questioned. One of the rooms of

the castle of Warwick was formerly covered with arras, on which the story of the battle between Guy and Colbrand was represented. This giant's battle-axe, or an axe bearing his name, was preserved for many generations in the Cathedral of Winchester. In the porter's lodge at Warwick Castle are shown the so-called armour of Guy, consisting of his sword, shield, breastplate, helmet, walking-staff, and tilting-pole. The armour is enormously heavy, and undoubtedly very antient. The walking-staff and tilting-pole are of gigantic dimensions. In the same lodge there is also to be seen a large bell-metal pot, which, when a boy, the writer was gravely assured was Guy's porridge-pot. The contents of this vessel, consisting of many gallons, the hero was in the habit of devouring every morning for his breakfast. There are also exhibited here, Guy's flesh-fork, his lady's stirrup of iron, an enormous rib, said to be a rib of the dun cow, the pith of her horns, one joint of her spine, and a tusk and shoulder of the wild boar.

Having attempted to give a brief account of the traditionary antiquities connected with Guy's Cliff and the hero from whom it derives its name, we shall now proceed to describe its present state.

It is impossible to give by any written description of Guy's Cliff (at least the writer feels it impossible) an adequate idea of its beauties. The front of the house is seen from the Coventry road through an avenue of gigantic firs, but this avenue is not the entrance to it, nor could any one, majestic as the trees are, form any notion of the place itself by viewing it from this point. The approach to Guy's Cliff is from the Coventry road, a little to the left of the avenue of firs just spoken of. It is carried along the edge of open and extensive grounds, by the side of shady plantations, terminated by a lofty and beautiful stone arch, which leads into the court, a most romantic and interesting place. The whole of this court is hewn out of the solid rock. There are subterraneous passages and cellars underneath, from one of which the influence of the external atmosphere is so completely excluded, that the temperature is found, in the hottest and coldest days of the year, to vary only a single degree. Opposite to these cellars are the stables and other offices, entirely formed in the rock. The summit of this rock is crowned with shrubs, cedars, and other ornamental trees, whose spreading and overhanging branches throw their dark shade over all beneath them, and give a singularly striking effect to the place, which may perhaps be imagined, but cannot easily be described.

On the left of this court, seated on the solid rock, which overhangs the Avon, though not here visible, stands the house, the side and carriage entrances to which are alone seen. It is substantially built of stone, presenting a solid and imposing appearance. Some of the lower apartments of the mansion are formed out of the solid rock. They are however remarkably dry and healthy, and from the other side command a delightful view of the "silver-flowing Avon," the river of Shakspere, whose pellucid streams wash the rocks just beneath the windows, from which we have a view of large and beautiful meadows, green as the emerald, and interspersed with fine old trees, the whole being animated by grazing cattle and flocks of sheep. Beyond these meadows may be seen, perhaps a quarter of a mile from the house, an antique and picturesque water-mill, older than the Conquest, the voice of whose waters, as they are seen splashing over the revolving water-wheels, gives a charm to the scene which no one, without beholding, can properly appreciate. In the foreground we have also a view of a rural bridge, and in the back, of one or two interesting cottages.

Beyond the mansion, and in the court opposite the stables of the rock, which remind us of the city of Petra, stands the ancient chapel of which we have before spoken. Its embattled tower and Gothic windows, originally built in the reign of Henry VI., between four and five hundred years ago, are not without their effects upon the general appearance of this most romantic place. We ought to add that these stables have no external appearance of being so appropriated.

But to be enabled to set a proper estimate upon the beauties of this part of Guy's Cliff, it must be seen at different times and under different circumstances. A hasty view of it by broad day-light, though very beautiful, will convey a very inadequate idea of the place. The writer has seen it by the pale moon-light of a fine summer night, when the tops of the trees and shrubs were "tipped with silver," and when the varied plumage of the peacocks, Guiana hens, pheasants, and other fowls that take their evening rest amidst their branches, are faintly, though at the same time chastely and beautifully visible. He has seen it too in the spring, when the shrubs were putting on their mantles of green; and on a clear winter evening, when they were clothed with the hoar frost rendered mildly brilliant by the countless stars of heaven. Oh! charming Guy's Cliff, dear haunt of memory of days that are past, thou art indeed most beautiful, whether beheld in the light of the rising sun or during his meridian splendour, whether in the gloaming of the evening or amid the thunder and lightning of the ungovernable tempest.

We have said thus much of what some would designate the mere back part of this delightful spot. We shall now proceed to draw our readers' attention to some of the other beautiful scenes which it presents, and for this purpose we shall give them a walk through the pleasure grounds, at the commencement of which the eye looks down, over a low wall, on the abrupt descent of the rocks, to the depth of forty feet below, and thence wanders, need we say with delight, "over a rich and varied landscape stretched before it, formed by a striking combination of wood and water and gently swelling grounds."

From several points of this walk may be seen Blacklow Hill, on which was beheaded Piers Gaveston, earl of Cornwall, whose fate and history are too well known to be repeated here. The late Mr. Bertie Greathead, proprietor of Guy's Cliff, caused a very chaste and beautiful monument to be erected on this hill in commemoration of the event alluded to, on which is engraved an appropriate inscription, the production of Mr. Greathead. (See vol. iii., p. 364.)

But to return to the walk. Passing under the shade of the avenue of aged and gigantic firs before alluded to, "a gentle descent," to use the language of Mr. Field, "conducts to *Guy's Well*, at which, according to popular story, that religious champion was accustomed to slake his daily thirst. By order of Richard Beauchamp, earl of Warwick, says Leland, "the silver wells in the meadows were enclosed with pure white sleek stones like marble, and a pretty house erected like a cage, one end only open, to keep comers from the rain." This was done in the reign of Henry VI., and it remains still as it was then left. The water, issuing from two circular apertures, is beautifully clear. It is remarkable that the side of the well opposite the entrance is covered with moss, which, below the surface of the water, is petrified; but in the obscurer parts there is "neither moss nor petrifaction, a striking instance of the effects of *light* upon the growth of vegetables."

Leaving *Guy's Well*, we are conducted to that part of the rock on the perpendicular edge of which the house stands, forming a very striking and interesting object, which has frequently formed subjects, from different points of view, for the easel of the painter. The overhanging ivy, which clothes the sides of the rock, produces a very rich and beautiful effect. In the rock itself there are several chambers; but it is difficult to say, from their appearance at this time, whether they were originally

formed by art or nature. As we proceed we have a view of the chapel, under which there are several apartments, anciently the habitations of the chantry priests. These apartments remain unaltered and entire.

The next object of curiosity which presents itself is Guy's Cave,

> "Where with his hands he hewed a house
> Out of a craggy rock of stone;
> And lived like a palmer poor,
> Within that house alone."

So runs the legend; but we agree with Mr. Field, that its upper part has all the appearance of a natural cavity. The lower portion, however, is evidently hewn out of the rock, and resembles a grave. According to some traditions, in this grave the renowned Guy was interred. On the side of the cavern a few single Saxon letters are visible, or were a few years ago. These are supposed to be the remnants of an inscription. A walk still called by the name of fair Phillis passes over the cavern. To this walk, says the legend, she was in the habit of going, while her husband, unknown to her as such, was engaged in his devotions below.

For the remainder of the description of this walk we shall, in substance, follow Mr. Field, who, just a quarter of a century ago, published a very interesting descriptive and historical account of the town of Warwick and its environs.

Pursuing the course of the walk, the rocks assume a more romantic and bolder appearance, and from their towering height, the vast variety in their form and colour, and the great diversity of trees, shrubs, and creeping plants, which everywhere fix their roots, and spread and throw their branches, the scene becomes beautifully picturesque, approaching to grandeur. On the opposite side, in pleasing contrast, appear the winding course of the "gently flowing Avon" and the soft fertility of the meadows. A winding path carried through a shady plantation leads to the summit of the cliff, the perpendicular edge of which rises nearly sixty feet, and commands a view of the surrounding landscape seen from a new point. As we pass towards the terrace we have an imposing view of the town of Warwick, with its beautiful tower of St. Mary's church, the spire of St. Nicholas, and the lofty battlements of the venerable and majestic castle. We have now reached the close of this enchanting walk, of which it was well said by Fuller, the celebrated author of the 'Worthies of England,' that "it is a most delicious place, so that a man travelling many miles cannot meet with such astonishing variety as this one furlong doth afford."

A short distance from the above walk, but hid from view by the plantations, there is a wild and secluded spot not usually shown to strangers. It is not, however, without its attractions to those who feel any interest in the rise and progress of Guy's Cliff House. This place is principally occupied by a stone-quarry, which, in the time of Mr. Bertie Greathead, the late proprietor, was worked for the purpose of procuring stone for the erection of some additional buildings to his mansion. In the middle of this quarry there stands a grotesque statue of something like a man, formed out of a portion of the rock evidently left, and probably for that purpose, by the quarry-men when engaged in removing the surrounding stone. This statue, if we may so call it, bears an inscription written by the late Mr. Bertie Greathead, in imitation of the South Warwickshire dialect, of which it is the only written specimen we ever saw. As it is believed that it has never been published, we subjoin a copy:—

> "Here be I, Dick Ward, y-een aout i' the rock,
> To which I ha' geen full monny a nock,
> And a thisn shall stond 'ill wayager a paound,
> When ye loggeryeds all lie six feet i' the graound.
> Thof my bak's summut humpy,
> And my legs ower stumpy,
> Ye may loffe a ye wool,
> But never a sole
> Among yon grinners
> Coold meach sich a hole:
> Will Russel cut ears, eyes, and nosy;
> The Squier his sel faound aout the poesy."

Mr. Bertie Greathead, though a man of fortune as well as a man of letters (he was the author of a tragedy called the 'Regent'), was familiar and kind to the workmen whom he employed and to all the labourers in his neighbourhood. He was emphatically a gentleman of the old English school, who, though he did not feast *all* the rich, he forgot no portion of the poor. He was descended on the maternal side from the dukes of Ancaster.

Of the interior of Guy's Cliff House we shall merely observe that it contains many large, commodious, and well furnished rooms, with a collection of paintings and sculptures, all of which are respectable, and some of extraordinary merit, both by ancient and modern masters.

Thistles on the Pampas.—After emerging from the quinta and chacara grounds, some six leagues from the capital, we came upon the cardales, or 'thistleries,' which, at the time I speak of, reached to Arroyo del Medio, the boundary of the province of Buenos Ayres. Since then they have gone on extending their dominions on all sides, and they seem destined to become at last the great vegetable usurpers of the whole Pampas. When I left Scotland, I thought I had left the country, par excellence, of thistles behind me; I now found that those of my native land, as compared with the 'thistleries' of the Pampas, were as a few scattered Lilliputians to the serried ranks of the Brobdignagians. From one post-house to another a lane was cut out through these huge thistle-fields, which hemmed you in on either side as completely as if you were riding between walls fifty feet high; you saw as little in the one case as you would in the other. The cattle find *shade* in these cardales, and are often lost among them for days: they afford a good shelter for highwaymen, and when at their highest growth, they are a favourite resort for gentlemen of the road. They tower above your head, and in many cases hide the post-house from your view till you come close upon the door. In short, Pampas thistles, like all things else in South America, are on a large scale.—*Robertson's Letters on Paraguay.*

Why the Nettle stings.—The common or large nettle is known by grievous experience to every one, though perhaps you have never yet inquired whence the pain arises from touching it. The sting is not, like a pin or needle, solid throughout, but is hollow at the centre and perforated at the point; and, when touched, it is not only sharp enough to pierce the skin, but also is so constructed as to inject a particle of poisonous fluid into the wound it makes, and this is the source of the pain which follows. The wound itself is so minute that it would scarcely be felt; but the poison irritates, inflames, and causes the well-known pain alluded to. The plant, the small species of which stings the most severely, is covered all over with hairs; but, by using a microscope or a magnifying-glass, you may perceive that these are not all of one kind, some being perforated, which are the stings, whilst others are not. Each sting stands upon a pedestal, and the pedestal performs the office both of gland and poison-bag. It is cellular and spongy within; the sting is placed on its top, and may be moved by a slight pressure to either side, or round in a circle: it seems to stand, as it were, on a universal joint. When a body touches its point, the base is pressed down into the spongy pedestal, and the poisonous fluid rushes up through the tube of the sting, and flows out of the terminal aperture.—*Drummond's Letters.*

Roads in Shetland.—Walking is, of course, a most necessary accomplishment in this country, where the shoes are made of materials so very substantial, that an old gentleman used to say, "he wore in the morning three rows of nails on the sole, but for full dress only two rows."—*Miss Sinclair.*

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